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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,120	07/11/2003	George G. Blankenship	LEE 200322	2939

27885 7590 08/23/2005

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EXAMINER

SHAW, CLIFFORD C

ART UNIT PAPER NUMBER

1725

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/617,120

**Applicant(s)**

BLANKENSHIP ET AL.

**Examiner**

Clifford C. Shaw

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed on 12 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-32 is/are allowed.
- 6) ☒ Claim(s) 33-41 is/are rejected.
- 7) ☒ Claim(s) 42-44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 and 12 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**Detailed Action**

1.) The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2.) Claims 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata et al. (4,418,265, of record). Figures 2-5 and the discussion in columns 4 and 5 of the patent to Tabata et al. (4,418,265) disclose a ferrite saturable reactor ring 11 having a length greater than its outside diameter and a rectangular cross section as claimed. The claims differ in calling for a “soft” ferrite reactor having a saturation flux less than 0.5 or 0.4 Telsa. This difference does not patentably distinguish over the reactor ring of Tabata et al. (4,418,265). In his column 5, line 5-7, Tabata et al. (4,418,265) discusses a relative permeability of 760 for a ferrite to be used in his system. In column 5, line 25, Tabata et al. (4,418,265) states that a maximum relative permeability for ferrite is around 5000. On page 14 of his specification, applicant characterizes a “soft” ferrite as having a low relative permeability. It is considered obvious that the relative permeability of 760 discussed in Tabata et al. (4,418,265) is low compared to the maximum value of 5000, and that the ferrite used in the ring of Tabata et al. (4,418,265) can therefore be considered “soft” and therefore has the saturation characteristics claimed by applicant. In regard to the intended use of the reactor ring to delay a voltage of a transformer primary, the same does not impose any structural limitation on the reactor ring being claimed that would distinguish over the reactor ring of Tabata et al. (4,418,265).

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3.) Claims 36 - 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabata et al. (4,418,265) as applied to claims 33-35 above, and further in view of the British document no. 1310361, of record. The only aspect of the claims to which the rejection above does not apply is the provision for a heat sink around the reactor ring. This difference does not patentably distinguish over the prior art. At the time applicant's invention was made, it would have been obvious to have provided the reactor ring of Tabata et al. (4,418,265) with a heat sink as claimed, the motivation being the teachings of the British document no. 1310361 that such is advantageous for a saturable reactor ring (see figure 1a, heat sink 3 around reactor ring 2).

4.) Claims 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blankenship (5,349,157, of record) taken with Tabata et al. (4,418,265). The sole figure in Blankenship (5,349,157) and the discussion at column 8, lines 30-40 disclose an inverter driven power supply with a pulsed transformer 20 having a reactor 370 in series with the transformer. The claims differ from Blankenship (5,349,157) in calling for a soft ferrite ring. This difference does not patentably distinguish over the prior art. At the time applicant's invention was made, it would have been obvious to have used the ferrite ring disclosed in Tabata et al. (4,418,265) for the system of Blankenship (5,349,157) because these two rings are performing the same function of blocking high frequency pulses in a welding power supply. The ring of Tabata et al. (4,418,265) is obviously of "soft" ferrite as discussed above, and would thus obviously satisfy the claim limitations directed to the ring in claims 39 and 40.

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5.) Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Blankenship (5,349,157) taken with Tabata et al. (4,418,265) as applied to claims 39 and 40 above, and further in view of the British document no. 1310361. It would have been obvious to have provided the combination in paragraph 4 above with a heat sink as claimed for the same reasons as set forth in paragraph 3 above.

6.) Claims 42-44 are objected to for depending from rejected claims, but would be given favorable consideration if recast in independent form to include all of the limitations of the parent claims. None of the prior art of record teaches or suggests an inverter driven welder with the specific saturable reactor operable to delay primary winding pulses in the manner set forth in the claims.

7.) Claims 1-32 are allowable over the prior art of record. None of the prior art of record teaches or suggests a power source with the features claimed in claim 1, specifically the particular saturable reactor that delays voltage pulses in the primary winding as claimed in the improvement clause. The other claims are allowable at least because they depend from claim 1.

8.) Applicant's arguments filed on 5/12/2005 have been fully considered but they are not persuasive. The new drawings have been received and overcome the objection in the previous Office action. Applicant's amendments to claims 1-32 are deemed to place these claims in condition for allowance as discussed above; claims 42-44 would be allowed if placed in independent form, as discussed above. Amended claims 33-38, directed to a ferrite ring with

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particular magnetic properties are not deemed to distinguish over the prior art. Amended claims 39-40, directed to an inverter driven welder with a ferrite ring, are too broad to distinguish over the prior art.

9.) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication should be directed to Clifford C Shaw at telephone number 571-272-1182. The examiner can normally be reached on Monday through Friday of the first week of the pay period and on Tuesday through Friday of the second week of the pay period.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas G. Dunn, can be reached at 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Clifford C Shaw  
Primary Examiner  
Art Unit 1725

August 19, 2005